



# INFINITUM

Annual Report 2017



**INFINITUM**

RETURN EVERYTHING. IT'S WORTH IT.

Infinitum owns and operates the Norwegian deposit-return system for beverage cans and bottles. Thanks to us, only 1 in 8 bottles washed ashore the Norwegian coastline actually comes from Norway. Even though, we won't be satisfied until the sum of Norwegian bottles littering our beaches and shores is down to zero, and the number of foreign bottles is substantially reduced.

The cycle of using and recycling drink bottles and cans has a huge impact on the environment. The infinite number of times they can be recycled gave inspiration to our name, Infinitum.

Deposit every can and bottle. It has a value.

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2

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38 employees

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3

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4

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## FACTS

### 1902

A deposit return scheme for Refillable glassbottles was established in Norway.

### 1980s

The trade and commerce industry wanted recyclable and non-refillable bottles and **cans** and

### 1995

The deposit return scheme is approved by SFT the Norwegian Pollution Control Authority, today's Norwegian Environment Agency.

### 1996

The company Norsk Resirk was founded on 11 November. Retailers and producers are equal shareholders through their industry associations.

### 1999

Norsk Resirk's deposit-return scheme for beverage cans and recyclable bottles is established. The scheme is open to all. The first deposit-carrying can is returned through the system on 3 May 1999.

### 2000

The first recyclable bottles are registered with the deposit-return scheme. Norsk Resirk opens a dedicated facility at Alnabru in Oslo.

### 2001

Lower transport costs on materials sent for recycling.

### 2002

Norsk Resirk is granted tax exemption.

### 2003

In the company's fifth year in operation, 92 per cent of all cans and 77 per cent of all beverage bottles were recovered via the deposit-return scheme. Norwegians already lead the world when it comes to returning their empties.

Odd Børretzen features in a thought-provoking infomercial about the benefits of returning used beverage containers. The infomercial proves to be extremely successful for many years to come.

### 2004

Norsk Resirk has another successful year, with an increase in the number of both beverage cans and recyclable plastic bottles collected.

Our results show that the public is getting better and better at returning a larger number of products carrying a refundable deposit, but also due to a massive campaign to advertise the scheme across the whole country. The greatest advertising effort is timed to coincide with holiday periods, when people leave behind their normal habits of returning their empties. This strategy produces measurable results – a 93 per cent reduction in the environmental levy imposed on cans and on PET bottles.

Norsk Resirk takes over staffing at Alnabru.

### 2005

In his doctoral thesis, Arne Eik finds that the deposit-return system for PET bottles has become significantly more environment friendly and cost effective. The COOP OBS hypermarket at Lade

in Trondheim tops the return statistics, with over a million bottles and cans.

### 2006

Norsk Resirk opens a production facility at Bjerkvik to serve Northern Norway.

Norsk Resirk enters into a nationwide collaboration with the Norwegian Red Cross with the installation of return containers. This provides the Red Cross's local branches with a nice source of income. For example, with the money it has collected, Gol and Hemsedal Red Cross has bought a second-hand ambulance.

### 2007

Kjell Olav Maldum takes over as CEO from Jarle Grytli.

A survey carried out by Infact in December 2007, shows that people living in Troms, Finnmark and Oslo are the best at returning their empty beverage cans.

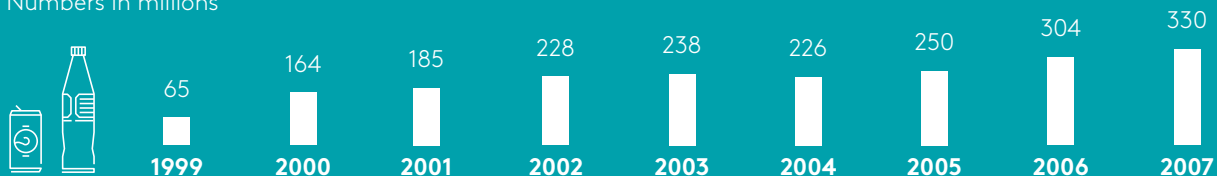
Sports clubs are given the chance to collect refundable bottles and cans using a new container from Norsk Resirk.

The Norwegian Red Cross Mountain Rescue teams raise a substantial NOK 2 million from the refundable deposit on bottles and cans they collect – as much as they receive in government grants.

### 2008

For the first time in 40 years, Norway's largest dairy producer, TINE, launches a series of bottled beverages, thanks to the deposit-return scheme. The new beverage Friskus is sold in PET bottles.

Items collected  
Numbers in millions



**2009**

The Norwegian Pollution Control Authority also agrees that refundable bottles and cans destined for energy recovery may be included as part of Infinitem's return percentage. Around 4 per cent of the total return percentage for cans and around 8 per cent of recyclable bottles are sent for energy recovery.

**2010**

The deposit-return scheme celebrates its 10<sup>th</sup> anniversary.

**2011**

The environmental levy on recyclable bottles is lifted because the approved return percentage exceeds 95 per cent of packaging sold.

The registration process for producers and importers is changed so that small importers are also able to join the deposit-return scheme.

Increased efficiency and changes in logistics and transport result in cost and environmental savings.

Norrøna buys PET for one of its fleece collections to highlight the benefits of returning and recycling beverage containers.

**2012**

The environmental levy on cans is lifted because the approved return percentage exceeds 95 per cent of packaging sold.

MACK Bryggerier, Ringnes and Coca Cola Enterprise, switch from refillable to non-refillable PET. The other beverage producers followed their lead.

Opening of a new production

facility for Central Norway at Heimdal, just outside Trondheim.

**2013**

Opening of a new production facility for Southern Norway at Heia, Fetsund, and also a production facility in the north of Norway at Bjerkvik.

**2014**

Norsk Resirk changes its name to Infinitem. The name and the logo are strongly inspired by the infinite number of times bottles and cans can be recycled through the deposit-return system.

**2015**

As a pilot project ('smart returns'), bottle and can holders are attached to the outside of selected public trash cans at Grünerløkka in Oslo.

**2016**

As a pilot project ('smart returns'), bottle and can holders are attached to the outside of selected public trash cans at Grünerløkka in Oslo.

**2017**

2017 was a paradigm shift for Infinitem. Producers worldwide changed their minds and started to take a positive view of deposit-return schemes, the producer responsibility and the way this is organised in Norway.

In January, Sky News visited our facility at Fetsund. They did a report on Norway's deposit-return scheme, which they used in the launch of the Sky Ocean Rescue campaign that

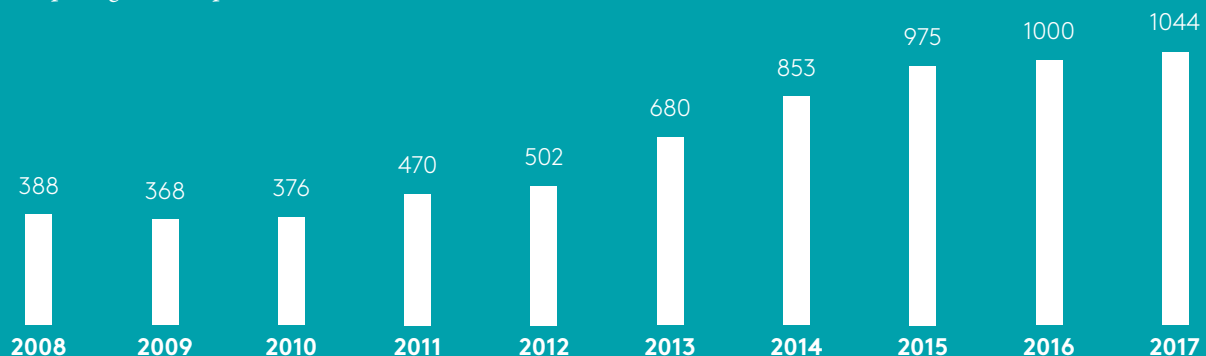
focuses on pollution of the sea and efficient waste management. Since the Sky News report, Infinitem has received several visitors from all around the world, who want to learn more about how the deposit-return scheme works.

In the autumn of 2017, it was finally decided to increase the refundable deposit from NOK 1 and NOK 2.50 to NOK 2 and NOK 3 respectively. In connection with its vote, we sent the Norwegian parliament (Stortinget) specially produced water bottles carrying our message about increasing the rates.

As part of the overall responsibility Infinitem takes as a producer, we calculated our overall climate footprint. Using lifecycle analyses, we showed the efficiency of the deposit-return system, from the time the bottles and cans are produced until they are turned into new materials.

Based on this insight, we produced a film in which Andreas Wahl explains the scheme's supply chain and, in an easily understandable way, goes through what happens from the moment you return your empty until the bottle or can are given a new lease of life.

By using memes – humorous images with accompanying texts – we generated a lot of attention in social media on the subject of returning empties and reclaiming the refundable deposit, particularly among young people. Pictures like 'Make Bottles Bottles Again' and 'Yes we CAN' became hits among our followers.



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# FOCUS 2017





# LAST YEAR



“2017 saw a paradigm shift for Infinitum. Producers all over the world changed from being strongly against deposit-return schemes to supporting them, explains Infinitum’s CEO Kjell Olav Maldum.

2017 started well.

“In January 2017, we received a visit from Sky News. They filmed and broadcast live from our production facility at Heia. Sky News used the report to kick off their two-year anti marine littering campaign and efficient waste management, called Sky Ocean Rescue.

“Infinitum has carried out several lifecycle analyses, which give us the same answer. Plastic bottles and aluminium cans are extremely efficient packaging materials, provided that they are part of an effective collection system. And our deposit-return scheme certainly is.”

For Infinitum, therefore, 2017 was the year in which deposit-return schemes were put firmly on the international agenda.

“We were invited to the Scottish parliament and meetings with the politicians. Scotland has now decided to establish a deposit-return scheme! England and Wales are preparing to do the same. British Secretary of State for the Environment, Thérèse Coffey, came to visit us to learn how we handle beverage packaging in Norway. The BBC did several TV reports about us, and we were interviewed by BBC Radio. We were visited by delegations from the Netherlands, France, China, England, Rwanda, Kazakhstan and Latvia, as well as many more through the Green Business Norway initiative.”

In Norway, too, Infinitum attracted more attention.

“We received several invitations to address different forums, and Infinitum Movement attracted a lot of attention for the environmental campaign “Pant for pudder”. A campaign to teach ski lovers to make an effort for the environment to still keep the good nice winters with powder snow,” chuckles Maldum, nodding towards the snow that still lies thick on the ground despite Easter having been and gone.

And what will be the biggest challenges for Infinitum in 2018?

“The time is more than ripe for the introduction of a materials levy. Together with the authorities we will continue this work. We need an act of political courage to get the materials levy introduced. Both the Norwegian Environment Agency and the Tax Directorate support the model and confirm that it would have a substantial environmental impact. It builds further on

Thorbjørn Berntsen’s original decision to introduce an environmental levy. In addition, we want to remove energy recovery as an approved form of recycling, in line with the Norwegian Environment Agency’s wishes.”

Important moves are also afoot within Infinitum itself and the industry as a whole.

“We are also working to establish a materials recycling plant at our facility at Heia outside Oslo, and the constructive dialogue with **Green Dot** and ROAF (Romerike Avfallsforedling IKS) continues. If we are going to resolve the problems surrounding waste management, littering and resources, all of us collectors must work together.”

Your beard has grown quite a bit longer in 2017?

“When we presented our model for a materials levy to the Norwegian Environment Agency, I joked that I would let my beard grow until I had united Norway into a single materials levy realm! At our next meeting, they commented that I still had a beard. After that, there was no way out. If you are running the world’s best deposit-return system, you have to be a man of your word. We’ll just have to see if the Norwegian Minister of Climate and Environment, Ola Elvestuen, can ensure that I can give my chin an airing soon. He should, out of respect for Mother Earth!”

So, what are you proudest of in 2017?

“That we receive such good feedback from so many of those who visited Infinitum to learn how a cost and resource-efficient deposit-return system should be set up, and that we have increased the return rate for PET bottles by 1 percentage point to a whopping 87.8 per cent.

We documented that we are working systematically on our profile. We are and must remain knowledgeable, devoted to environmental protection, inclusive, courageous and innovative.”

You have also been extremely active on social media?

“The number of enquiries and specific questions that we receive is increasing. And we spread our message and engage young people. So, we must be where people are, and able to answer all the questions that may come up. That we succeeded in boosting the collection rate from an already high level shows that our information and advertising efforts are of a high quality and generate a positive response.” ●



Kjell Olav Maldum  
CEO, Infinitum



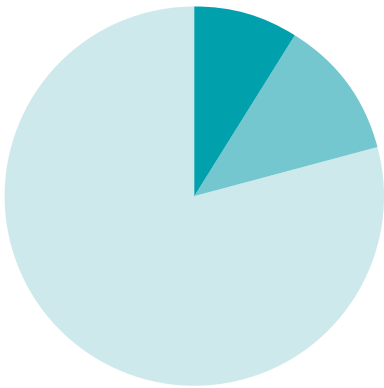


# PLASTIC

## FRIEND OR FOE?

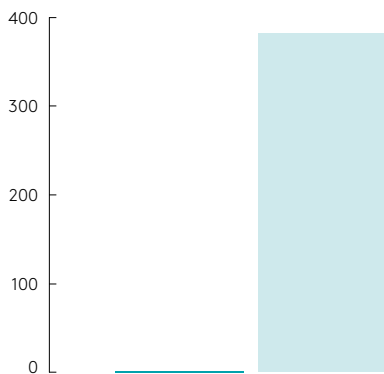
Will the world be flooded with rubbish?  
2017 was the year when plastic waste  
finally approached the top of the global  
environmental agenda.





6.3 billion tonnes of plastic have been produced worldwide. Of this:

- 9% has been recycled
- 12% has been incinerated
- 79% still exists somewhere in the world



Global plastic production

- 1967  
2 million tonnes
- 2007  
380 million tonnes

The cult film ‘The Graduate’ premiered in 1967. In the film, handsome young Benjamin – played by Dustin Hoffman – is seduced by one of his parents’ women friends. Her husband gives young Benjamin a piece of careers advice: “Plastics. There’s a great future in plastics. Think about it. Will you think about it?”

On Saturday, 28 February 2017, a whale stranded three times on the beach at Sotra. In the end, it was euthanised. A post-mortem examination revealed over 30 plastic bags clogging the stomach of the rare Cuvier’s beaked whale. In an interview with the Norwegian public service broadcaster NRK, Terje Lislevand, a zoologist and lecturer at the University of Bergen, said the whale was underweight and must have suffered greatly before it stranded.

The event gave us in Norway a clear picture of how the once lauded plastic-based future has turned out.

In 1967, the world produced 2 million tonnes of plastic a year. In 2017, it had risen to 380 million tonnes. Plastic consumption has risen three times faster than global GDP growth. Of the 6.3 billion tonnes of plastic that have ever been produced, only 9 per cent has been recycled, while 12 per cent has been incinerated.

Which means that around 4.9 billion tonnes of plastic are still around. That corresponds to the weight of more than 2 billion Teslas – a figure almost impossible to comprehend.

If today’s trend continues, the world’s oceans will contain more plastic than fish by 2050. Trucost, a company that specialises in calculating environmental costs, has worked out that the pollution of the seas costs USD 13 billion a year. The total global environmental cost of plastic pollution is estimated at a staggering USD 139 billion a year.

So, it is not terribly surprising that 2017 became the year when many countries decided to do something. In Bangladesh, France and Rwanda, plastic bags are now banned. In Kenya, you risk four years in jail or a huge fine for providing them. Since the UK introduced a levy



We believe that the solution is obvious. We have been practicing it since 1999. Reuse! The circular economy. Plastic is not rubbish, it's a resource. Used plastic can be turned into new plastic, which minimises the problems caused by plastic waste. It won't be easy, but we prove every day that it is possible.

on plastic bags in 2015, consumption has fallen by over 85 per cent. Coca-Cola has now promised to collect up and recycle the same volume of beverage packaging as it produces – including 110 billion plastic bottles.

In 'The Graduate', plastic is a metaphor for the unnatural, artificial modern world. With the benefit of hindsight, we can now say that the current scale of the problem with plastic has proved the film's message to be correct.

But is it really plastic that is the problem?

If that is your conclusion, you might easily imagine that using as little plastic as possible is a good thing. The downside, of course, is that if you don't use plastic, you use something else. And that something else is, sadly, often a whole lot worse than plastic.

According to The Economist magazine, the cost of plastic pollution is not that substantial, compared with other sources of pollution. That is simply because plastic is so light. Producing 1 kg of plastic generates 2–3 kg of carbon dioxide. That is approximately the same as for 1 kg of steel, but five times more than wood. But plastic packaging weighs a fraction of packaging made of wood, steel or glass, which gives an entirely different volume per kg of carbon dioxide.

Many people have pointed to the canvas bag as the perfect replacement for plastic bags. But a

canvas bag would have to be used 131 times before it replaced the carbon footprint of a single plastic bag. And even more times if any of the plastic is recycled. And the carbon footprint of a disposable paper bag is four times larger than that of a plastic bag.

In many cases, it is impossible to imagine products that could replace plastic. Disposable gloves or condoms made of paper – no thanks!

So, plastic is both a problem and a fantastic product.

What, then, is the solution?

"Plastic is not the enemy. It is an amazing material. What matters is what we choose to do with it," said Richard Thompson, head of the International Marine Litter Research Unit at the University of Plymouth, one of the world's leading authorities on pollution of the seas, in an interview with the Financial Times.

We, at Infinitum, share his opinion. And we believe the solution is obvious. We have been practicing it since 1999, and we gladly spread the word outside of Norway, too. Reuse! The circular economy. Plastic is not rubbish, it is a resource. You can make old plastic into new plastic and minimise the problem of plastic waste. It won't be easy, but we prove every day that it is possible. ●

## STATISTICS FOR 2017



**508,096,599**

Cans returned\*



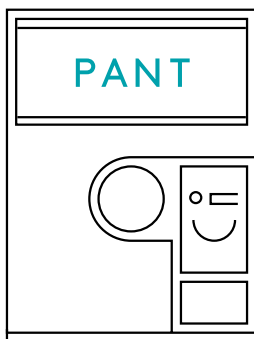
**535,687,113**

Plastic bottles returned\*



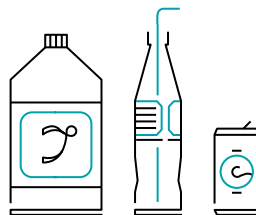
**1,043,783,712**

Total items returned



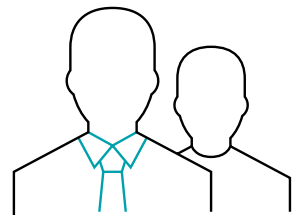
**12,000**

Return/refund points



**566**

Newly registered products

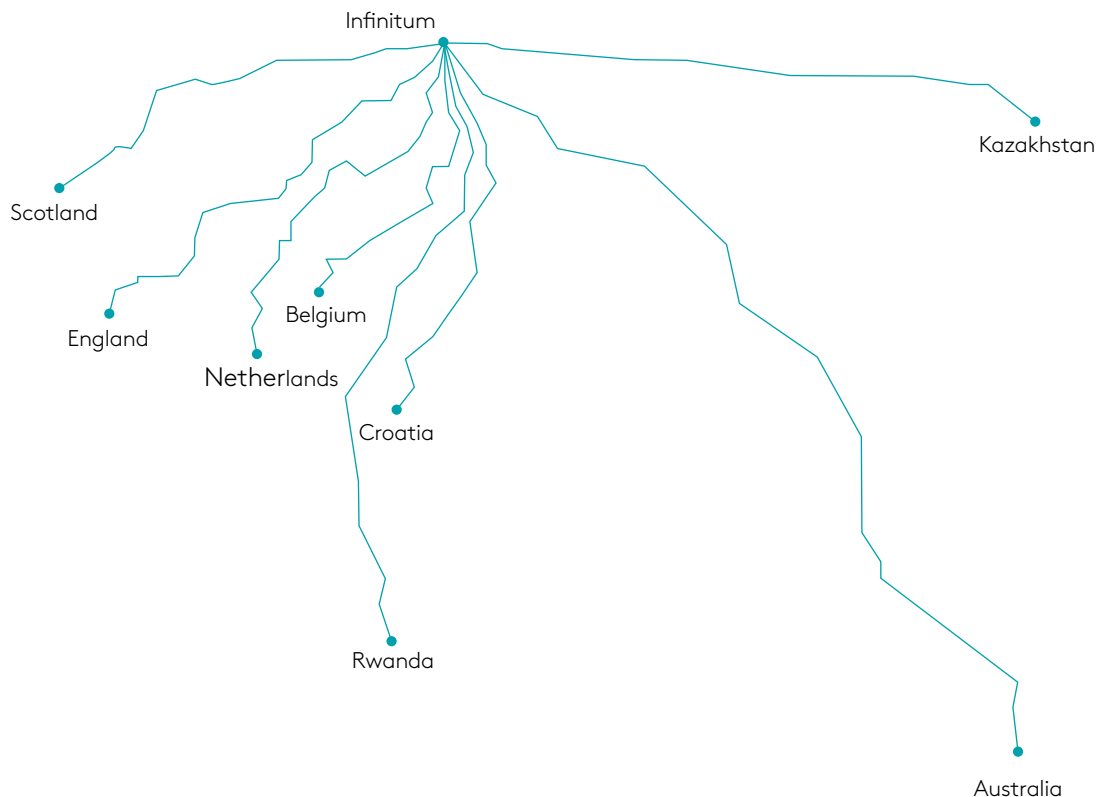


**27**

New producers/importers

\* Items collected via reverse vending machines.

## VISITORS FROM ALL OVER THE WORLD



Never before has the international community been more concerned about plastic, particularly in the ocean. Through Infinitum, Norway has the world's most efficient deposit-return system. That is why delegations from all over the world visit our facilities to study our system and learn how they can do the same.

In 2017, Infinitum was visited by 6 Norwegian and 15 international groups. Oreec, the Norwegian Environment Agency, architects from Snøhetta Arkitektkontor and ROAF, Sky News and the BBC, to mention just a few.

# NEW DEPOSIT RATES APPROVED



+



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## RETURN EVERYTHING. NOW IT'S WORTH TWICE AS MUCH. ALMOST.

The refundable deposit had remained unchanged for almost 30 years. But in 2017, the government decided to increase size of the deposit to NOK 2 and NOK 3 respectively.

Infinitum is convinced that the increase will lead to an even higher rate of return.

“Experience from Sweden shows that the return rate rose by 3.7 percentage points when they raised the deposit from SEK 0.5 to SEK 1. It will be exciting to see what the effect will be in Norway, but we can probably expect the return rate to increase by 2–4 per cent,” says Infinitum’s CEO Kjell Olav Maldum.

In its advertising campaigns, Infinitum has chosen to emphasise the value to the environment of materials recycling and making the most out of resources, rather than the size of the actual deposit.

“We have been keen to explain to everyone who returns their empties that they are doing something important for the environment, and that every single bottle contains energy that would be wasted if it were not returned,” says Infinitum’s information director Randi Haavik Varberg.

She underlines that Infinitum will carry on talking about energy and the environment after the rise in the deposit, too.

The change in the size of the deposit was agreed by the Ministry of Climate and Environment on 28 November 2017. The new rates will be introduced on bottles and cans during the spring and summer of 2018. During a transitional period, up to 1 September 2018, the old rates will also be used. In that way, the new deposit rates will gradually replace the old ones.

The deposit has risen from NOK 1 to NOK 2 for small bottles and cans, and from NOK 2.50 to NOK 3 for large bottles. ●

# INFINITUM AND THE ENVIRON- MENT

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**34** The Norwegian Refundable Deposit Labels Worldwide

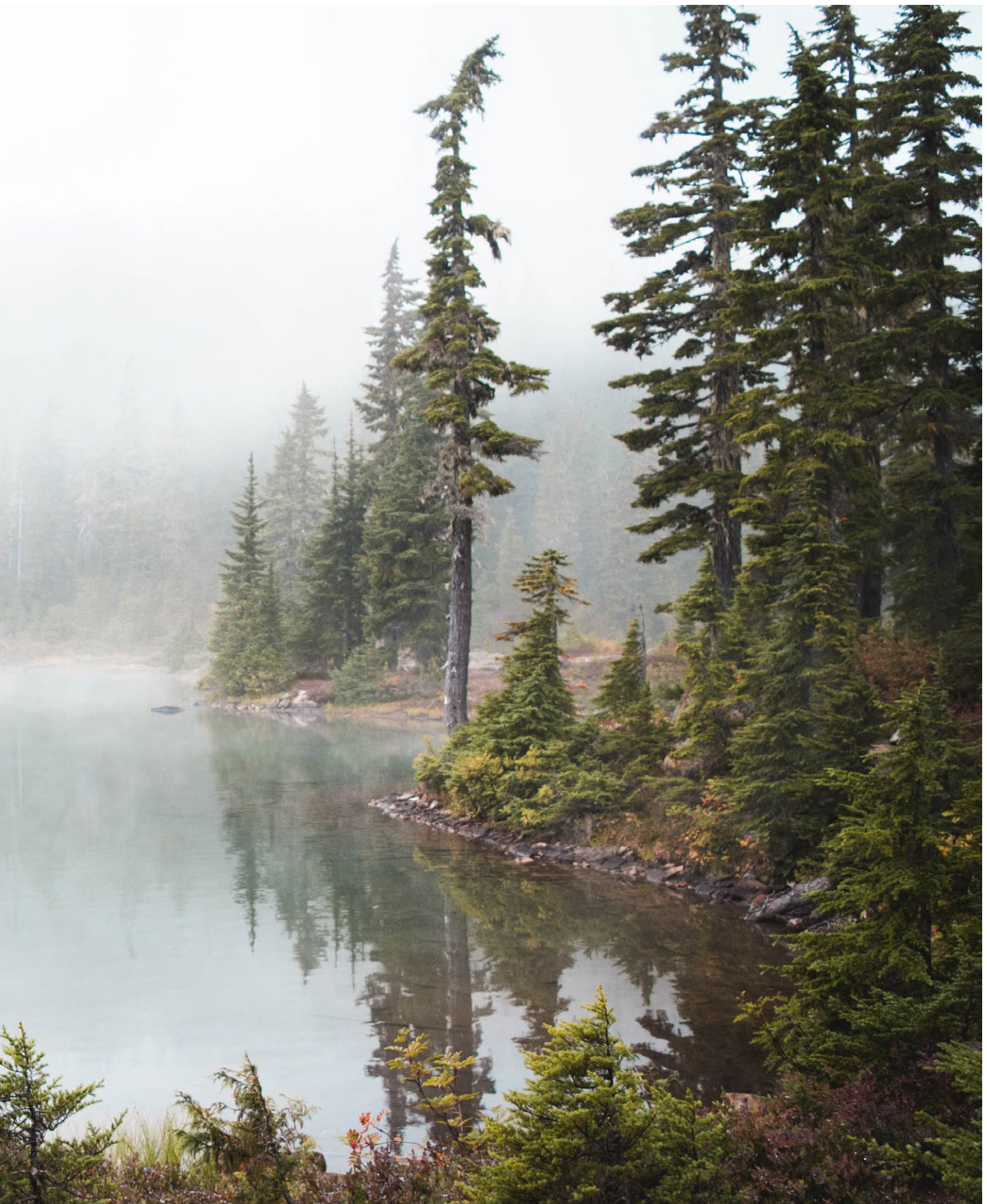
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## WHY SHOULD WE TAKE CARE OF NATURE?

→





You shouldn't throw your rubbish in the nature. Bottles and cans should be returned for recycling. Or, as it said in the book one of us reads to our four-year-old every night: "They were good people. They sorted their trash to be recycled."

But why should we do it?

The obvious answer is the one we generally give at Infinitum - if we return our empties, we use less resources. Too much plastic ruins the oceans and produces carbon emissions that drive global warming. Which, in turn, is damaging to us people.

Taking care of nature is taking care of ourselves.

But are there any other arguments in favour of taking care of nature?

In Norway, philosophers have traditionally been on the side of the environment. Zapfe and Sæterheim, of course. But looming largest in the popular consciousness is Arne Næss. It is he who embodies environmental philosophy in Norway.

Now, however, another name should perhaps be brought to the fore. For 2017 was not only the year when plastic was put on the global agenda. It was also the year when the young philosopher Sigurd Hverven published a book called 'Natural Philosophy'.

It is a gem of a book, in our view. Hverven calls the traditional justification for environmental protection anthropocentric. From this point of view, we should look after nature because it benefits us humans. The anthropocentric view of the world puts people at the centre of everything.

In his book, Hverven shows how this view has deep roots going back to the Enlightenment. He finds its origins in Descartes, who believed that the only thing humans could not doubt was doubt itself: "I think, therefore I am". This drew a sharp distinction between humanity and everything else in nature. For Descartes, animals were living machines. Living, yes. But without a soul, the spirit in the machine that gave them moral value.

Hverven shows how people's view of the world became radically altered. Once upon a time,

the world was full of life. Everything was alive. Everything was animated by a living spirit. That was how people experienced the world. Not only animals and plants, but also the heavens above. Life was the world's default setting.

According to Hverven, some philosophers believe this has now changed. Life has become a special case. A rarity. Objects, lifeless things are now the norm.

Linked with old notions that 'humans are the masters of nature', the outcome is predictable. Nature exists for the benefit of humankind. It is a thing and we can therefore exploit it.

As long as we don't ruin things for ourselves, of course.

But the philosophers that Hverven talks about have another reason for protecting nature than that we must do so to protect ourselves. According to these thinkers, nature has intrinsic value. Even though no people are harmed by it, intervention in the natural world can therefore be justified.

Hverven highlights a host of thinkers who have published their thoughts on this. We have taken particular note of two of them.

Some natural philosophers believe that humans are the only individuals that count in a moral assessment. Animals are also individuals, but these are thinkers who do not differ from the average in essence, but only expand the circle of individuals who count from a moral point of view.

In our opinion, the most exciting thinkers cited by Hverven seem to be those who think ideas. For thinkers who believe that only individuals count morally, it would make no difference whether we went hunting for blue whales (on the verge of extinction) or the much more numerous minke whale.

The first of these holistic thinkers from Hverven's book that we would like to highlight is the American philosopher J. Baird Callicott. →

Once upon a time, the world was full of life. Everything was alive. Everything was animated by a living spirit. That was how people experienced the world. Not only animals and plants, but the heavens above them, and history. Life was the world's default setting.











→ Callicott saw the social group as a starting point for our morality; our moral consciousness is therefore older than what we think of as reason. Long before we learned to write, we had 'rules' for how we should live together effectively.

Morality grows out of community, is a precondition for community.

Inspired by forest guardian Aldo Leopold, Callicott has developed a theory in which it is such social bonds that have moral value, or as Leopold formulated it: "A thing is right when it tends to preserve the integrity, stability and beauty of the biotic community. A thing is wrong when it tends otherwise."

Some people have claimed that, as an ethical rule, this could lead straight to environmental fascism. Would it not then be permissible to do whatever to whoever threatened the biotic community? According to Hverven, that is too banal a criticism. That one should take the biotic community into consideration does not mean that that is the only consideration one should take.

But even with Callicott, value begins with people. We acknowledge the value of the biotic person. For Callicott, nature without people has no intrinsic value.

However, the other thinker we would like to highlight from Hverven's book believes it does. According to the American Holmes Rolston, there is value in the world, even when people are not there to see it. If we humans disappeared tomorrow, nature would still have its own intrinsic value.

For Rolston, organisms are normative systems. They distinguish between what is and what should be. Even though they act without conscious thought, their actions have a direction. They strive to preserve and further develop their own lives.

According to Hverven, people should respect these dynamic organisms, including entire ecosystems. To drive a species to extinction represents not merely the killing of individuals, but a kind of killing in which one kills not only the individual but the possibility of such individuals existing ever again.

For our own part, we ask: who can look at a mammoth skeleton and not grieve that they will never walk the earth again?

We humans have a duty to all valuable life, concludes Rolston.

When we think about the whales that strand on our beaches, their stomachs packed with plastic, it is difficult to disagree with him. All the more reason to work a little harder for the circular, sustainable economy that Infinitum is part of every single day. ●





## THE FATHER OF THE MODERN DEPOSIT-RETURN SCHEME

Who should get the credit for Norway  
having the world's best recycling scheme for  
beverage packaging?

"I've got to an age when people are always coming to tell me that I'm the father of this or that. It's really very nice!" laughs Thorbjørn Berntsen.

The 'Gob from Grorud' turns 83 in 2018. He was born in the Oslo suburb of Vestli in 1935 and joined the Aker Mekaniske Verksted shipyard as an apprentice at the age of just 16.

"I've also been called the father of Norway's Working Environment Act. For me environmental protection and the working environment are closely linked."

He remembers how they worked to degrease steel pipes at Aker. Carried round great buckets of trichlorethylene without masks or protection of any kind.

"If you go to buy that stuff today, the little bottle they sell would feature a large skull and crossbones on the label."

The dictionary describes it as an organic solvent. The compound can cause liver and kidney damage. It is carcinogenic and turns into phosgene when heated, which is highly toxic.

"The ships were covered in loads of that kind of stuff. Lead and mercury and trichlorethylene, and all that muck went straight to the bottom. Eventually, it became obvious that what we were doing had major environmental consequences.

The trade union's Education Committee

at Aker met once a week after work. Berntsen remembers one meeting particularly well. Thorleif Schjelderup, the first Norwegian to jump more than 100 m on skis and a keen environmentalist, told the meeting how the hillside above the aluminium works at Årdal had been destroyed by all the sulphur emissions from the plant. The deer that lived in the forest no longer had anything to eat.

"The connection gradually became obvious. Not only for me, but for anyone with eyes to see."

In 1973, Berntsen was elected a permanent member of the Norwegian parliament (the Storting), but he had already served as a deputy MP for several years. He had established himself as an influential figure on the left of the Norwegian Labour Party and a key opponent of EU membership. He ended up on the Environment Committee.

There he sat until he became Minister of the Environment in 1990.

"When I became environment minister, I had already been following all the cases that the ministry had been working on. No one else has done that. When I was appointed, Erik Solheim [from the Socialist Left Party] mouthed off about me maybe needing some adult education. Well, I replied, in all modesty, I think I am pretty well prepared. →

“If you’re going on a fishing trip and want to take a six-pack, you’re obviously not going to bother lugging six glass bottles with you once you’ve tried taking a six-pack of cans.”

→ He believes that he was able to push through the modern deposit-return scheme partly because he was so well prepared. But at the same time, he points to at least three other important factors.

“In 1986, the Brundtland Commission published its report, and we got a coordinated international debate on the environment for the first time. It was clear that waste, and in particular hazardous waste, was an urgent problem. For as long as humans have lived, waste has been an issue, but now it was given a completely different level of importance. In addition, the so-called producer’s liability was introduced, putting the responsibility on the producers. In Norway, we’d had a well-functioning deposit-return system for glass bottles since the turn of the century – because they were costly enough for it to be rational for the breweries. Now the sharp minds in the ministry cranked into action. The solution: a deposit-return system combined with an environmental levy that would gradually be reduced the better the waste management became. Brilliant! And then someone like me comes along and grabs all the glory,” says Berntsen with a smirk.

The sources we have spoken to at the Norwegian Environment Agency, among others, make no bones about Berntsen deserving the credit. The point is that the scheme, which in hindsight seems straightforward and smart, was extremely controversial at the time. Jobs would be lost because of the new scheme. Someone washed the glass bottles that were going to be replaced by glass and cans, and the beverage producers might simply relocate abroad. So the Labour Party faced

severe criticism from trade unions, producers and the political opposition.

An extremely high levy on cans and bottles was what smoothed the path to today’s system.

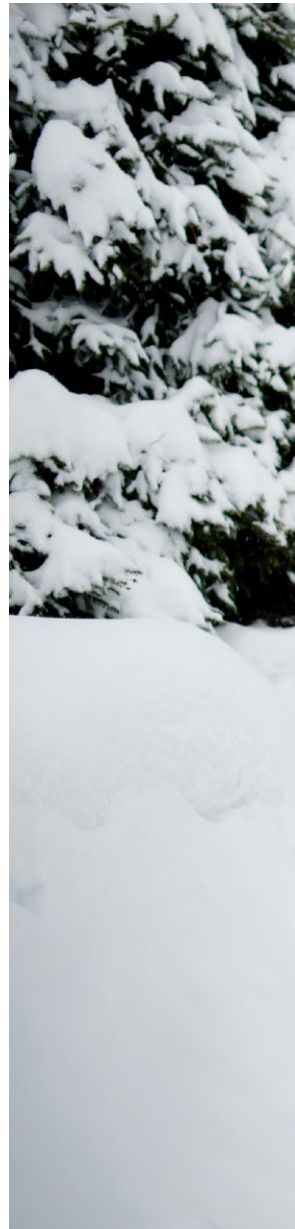
“Plastic bottles and cans were so much better packaging materials that they could handle a high levy. It was just a matter of nudging the whole thing into motion. If you’re going on a fishing trip and want to take a six-pack, you’re obviously not going to bother lugging six glass bottles with you once you’ve tried taking a six-pack of cans. And you’d never bother to take the bottles home with you. Empty cans, on the other hand, are light enough to be stuffed back into a rucksack.”

Once again, he pays tribute to the bureaucrats.

“It was an extremely smart plan. The thing is that the bureaucrats beaver away and come up with ideas. And maybe they are lucky enough that a minister comes along and listens and gets things done. But, of course, I’d been on the parliamentary environment committee for ages, and I stayed as environment minister for seven years – which allows you to accomplish things. Nowadays, ministers keep their positions for maybe two years. They come in, often with no experience of the sector, and when they finally start to understand things, they get moved on.”

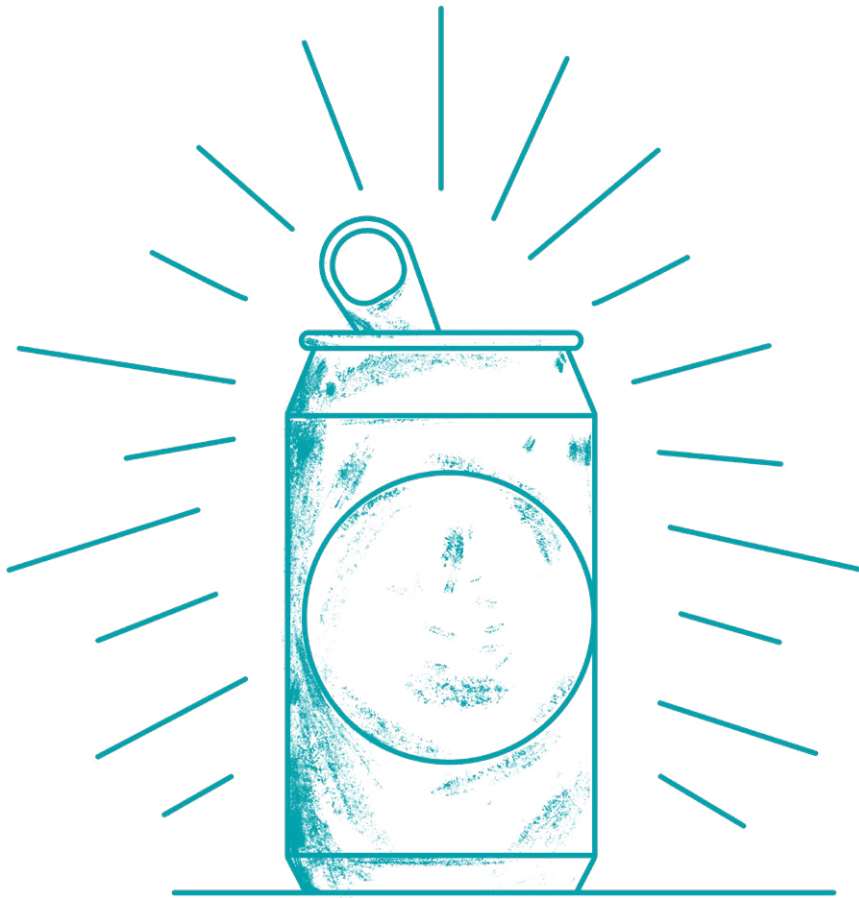
Berntsen will soon be 83, but remains passionate about environmental protection.

“I used to go camping with my dad. Unspoilt nature. Sleeping in the forest. The joy of it. That’s probably where it all began,” says Thorbjørn Berntsen. ●









## **THE NORWEGIAN REFUNDABLE DEPOSIT LABELS WORLDWIDE**

In the old carbonated factory at Galgeberg in Oslo, you will find a group of people who are passionate about quality beverages and craft beer. The drinks importer Cask is convincing more and more producers that beer in a returnable can is better than beer in a bottle – both in terms of quality and the environment.

“Canned beer has many advantages. Unlike glass bottles, cans keep the beer in a dark, air-tight environment, which is good for it. And then there are the environmental benefits.”

Patrick Pelsholen is a brand manager at Cask. The 28-year-old from Kongsvinger has been working on the import side since he finished college. He has been with Cask for almost a year.

“Craft products are a passion of mine. Discovering new tastes and positive experiences through quality beverages gives me a buzz. I’m particularly fascinated by beer, which makes this a dream job. I get to pursue my hobby during working hours! It makes it all the easier to get up in the mornings.”

#### **Quality products for knowledgeable customers**

Cask was established in 2009. The company imports, markets and sells brand-named beers, champagnes, wines and spirits in the Norwegian market. Today, they manage a portfolio of more than 100 products.

The brand manager explains that the beer portfolio started with the Scottish make, Brewdog. The first beer Cask sourced was a type of lager brewed with a little more hops than Norwegians were used to, which gives it a slightly more bitter taste.

“The critics said the lager wouldn’t catch on because Norwegians weren’t going to like the taste. However, our founder had faith, and sales rocketed. Shortly afterwards, Brewdog could be found in practically every Norwegian supermarket.”

Now beer imports are growing fast. Cask’s portfolio also includes brands like Ægir, Fever-Tree, Amundsen, Glogoyne, Michter’s and Barsol, to name but a few. On its website, the company explains its selection by saying that ‘Ever more knowledgeable customers are placing greater demands on us as a supplier. We have therefore collected a selection of what we consider to be quality products, which not only challenge the taste-buds, but are made by people who care.’\*

#### **The future in a can**

Beer in a bottle or a can? For many, the quality of the beer is the most important factor in the discussion. Beer connoisseurs know full well that beer’s worst enemies are oxygen, light and temperature. Cans take care of all these elements better than bottles.

“I hope everyone switches to cans soon. A lot has changed in the brewery industry, especially in recent years. But we still encounter resistance among hotel, restaurant and cafe customers, who want a bottle on the table. They claim

bottles look nicer. But I think it’s more about tradition and habit

In addition to the traditional view that beer should come in a bottle, several myths surround canned beer.

“People think that the beer has a metallic taste because it comes in a can. That’s an old myth that we are working hard to prove wrong. In an aluminium can, the beer never comes into contact with the metal. Each can has a water-based coating on the inside and the outside that prevents direct contact.”

The staff at Cask say they enjoy sharing their knowledge and are therefore determined to bust the myths surrounding canned beer. Among other things, they also point to the research on the environmental benefits of using aluminium cans instead of bottles.

“Half as many vehicles are needed to transport empty cans compared with bottles, and they weigh a staggering 90 per cent less! That means less fuel for both finished goods out and empties back in, and for the cans to be recycled. It takes less energy to melt aluminium than to melt glass. It has proved itself to be a more environment-friendly alternative.”\*

#### **International beers with Norwegian refundable deposit labels**

The company currently offers a wide range of craft beers. The products come from all over the world, and some producers are less keen to use the Norwegian deposit-return system than others.

“It can be a bit of a struggle with producers from countries that don’t have their own deposit-return system. For them, having to change their designs to accommodate the refundable deposit stamp is primarily an investment that they are often rather unwilling to make at the outset. But we often see that they end up using the same design worldwide. For example, Brewdog puts the Norwegian refundable deposit stamp on all the canned beer it produces. Which is rather cool,” says Pelsholen with a smile.

Cask is a strong advocate for putting refundable deposit stamps on all its products. It is best for the environment and with regard to air, light and temperature. And they are seeing a change in attitudes among producers, retailers and customers.

“Brewdog’s last ten product launches have been in cans. We are also seeing that the Norwegian wine and spirits monopoly, Vinmonopolet, is also asking after more canned products. Not only are they environment-friendly, you have all the other advantages over bottles. It’s a win-win situation,” he says in conclusion. ●

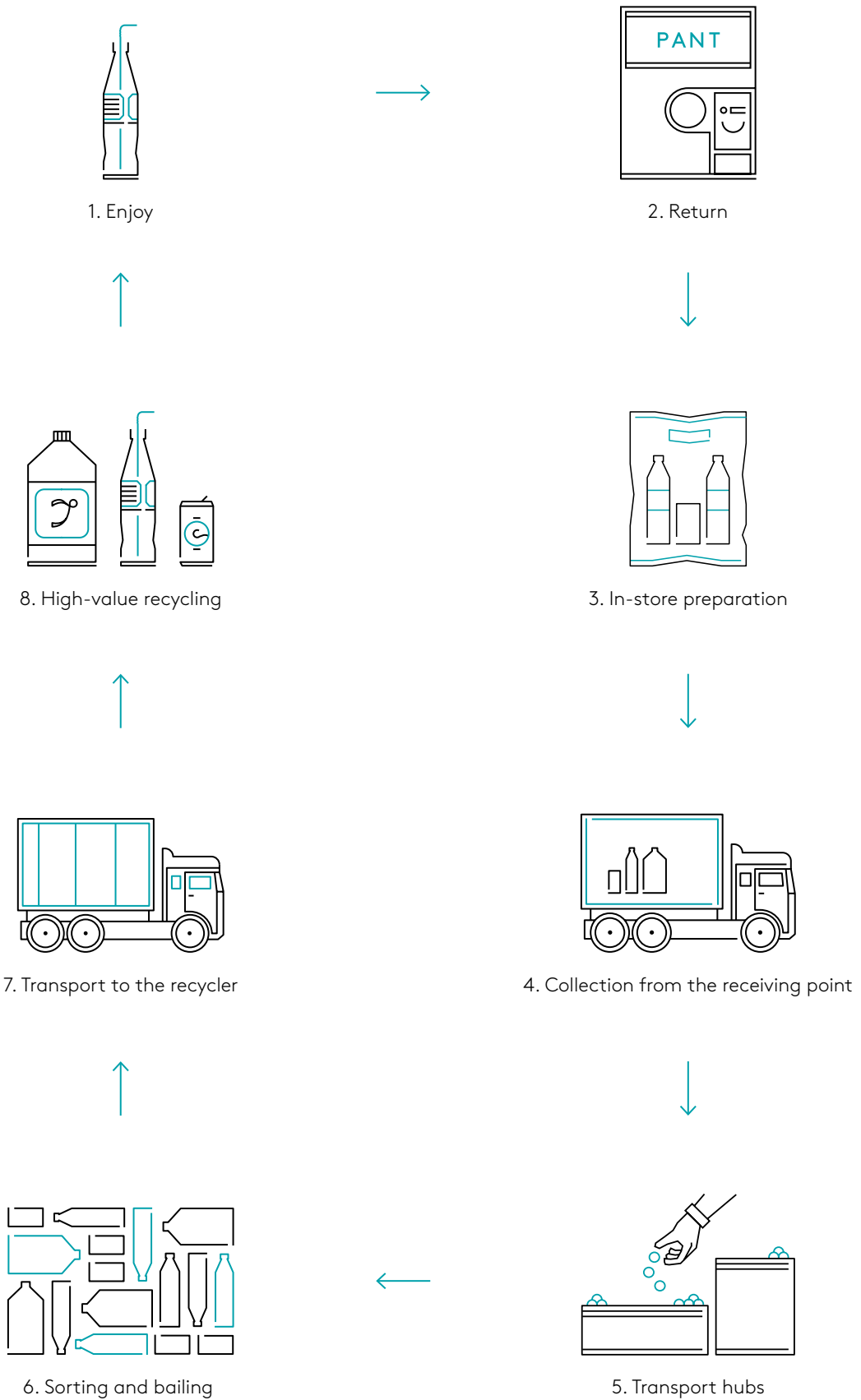
# ABOUT INFINITUM



## **THE DEPOSIT-RETURN SCHEME**

Infnitum's deposit-return system is a collaboration between the companies who produce, import and sell beverages. The cans and bottles that are part of the scheme can be returned, and the refundable deposit reclaimed, at around 12,000 supermarkets, convenience stores and filling stations nationwide. Around 3,700 reverse vending machines make the process simple for the consumer, but every outlet that sells bottled or canned beverages has a statutory duty to accept empties, even if they do not have a reverse vending machine.





About Infitum  
What is Infitum?



## WHAT IS INFINITUM?

A deposit return company? A cash flow?  
Or the right question:  
*Who is Infinitum?*

Osman Mahmoud was three years' old when civil war broke out in Somalia in 1991. He grew up in Mogadishu. What he remembers best is the lack of freedom. Being unable to move around freely. Everywhere was unsafe. Those who could, moved away. At the age of 12, he was one of the lucky ones. He fled – alone – to Oslo. Around 500,000 people were killed in Somalia's civil war.

If he is working a day shift at Infinitum's Heia facility, he gets up at 5 am in the flat he rents in Oslo's Carl Berner district. He gets himself ready and makes a packed lunch, which he often prepares the night before. He likes rice and pasta, sometimes mackerel in tomato sauce. Just before 6 am he gets in his car and head towards Fetsund. Depending on the traffic, he arrives at the latest at 6.40 am.

He was 12 years' old when he arrived at Gardermoen Airport in 2000. From there, he was sent to the Tanum refugee transit camp. He was twice lucky. Not only had he arrived in Norway, but he had an aunt already here. After a couple of months, he went to live with her in Stange. His first surprise was the freedom. He was safe. He could move around wherever he wanted. The other surprise came when winter set in. He was used to +30 °C degrees, but in Stange the temperature hovered around -20 °C. And it was dark for most of the day.

He likes getting to work early. Having a cup of coffee with his co-workers. Seeing how many containers have arrived. Planning the line. There

should be no stoppages. His shift begins at 7.15. How can you describe the huge machine that starts working then?

Every day, around 110 tonnes of plastic bottles and cans flood into the facility. Max. capacity is 10 tonnes per hour, and more than 25,000 tonnes per year. Or roughly the weight of 10,000 Tesla X cars, which lined up nose to tail would stretch all the way from Oslo to Trondheim.

Osman joined Stange football club. Carried on with that when he moved with his aunt to Jessheim. He was a striker. Most people were nice to him. Some were rude because he was a foreigner. He ignored them. He made lots of Norwegian friends. After completing his upper secondary education, he had a few unsettled years. He moved to Sweden and worked for a friend who ran a supermarket by the Norwegian border. In 2013, he got a job with what was then called Norsk Resirk.

He says he felt at home straight away. Lots of different people. Good colleagues. No harassment. He thought: I'll stick around for a while. That was almost five years ago. He is planning on staying a lot longer yet. Yes, it can sometimes be a bit exhausting. Particularly when he is on the late shift and does not finish until 10 pm. When he gets back to his flat just before 11, it is almost impossible to find anywhere to park in the vicinity. He often has to park far away. →



→ When he finally gets home, he drops straight into bed. There's little opportunity for socialising, which is why he prefers the day shift.

He works along the whole line. First where all the returned packaging comes in. On average, seven truck-loads an hour – ten at peak periods. The sacks and boxes are opened and put out of the way. Bottles and cans go onto the conveyer belt and into a drum that sorts out the lids, labels and bits of aluminium. Up to 550 m<sup>3</sup> of returned goods can be kept in a buffer silo to ensure that they keep flowing in a steady stream. A magnet pulls the cans out of the mass and separates them from the bottles that are left behind on the belt. The cans go directly to a compressor, while the bottles are sorted. An optical sorting machine separates clear and coloured bottles. The various types of bottles are compressed separately into blocks. As are the cans. Then all the blocks are sent for high-value materials recycling. A block contains 23,000 cans or 11,000 bottles. Empty beverage containers are not rubbish. They are a valuable resource.

Osman particularly enjoys working on Work Station 2. Here he hunts for rubbish that has sneaked past the sorting machine. Some people think it is a boring task. Just standing there. Watching. But he likes it. He knows that it is important. The purest possible raw materials. That's what they deliver. No one else





People with 17 different nationalities work at Heia. He likes that. Different people coming together to do an important job. That's good.

working on the line has as much influence over the quality of the product as the person here. It may be dull, but it is important. That is why he wants to do it.

Seven months ago, Osman and his wife separated. They never had any children. Now he is glad about that. But a bit sad, too. When things are tough at home, work becomes even more important. A fixed point when everything else is in flux. He is the employee health and safety rep now. He is keen to make sure everyone feels good about their job, that no one is harassed. People with 17 different nationalities work at Heia. He likes that. Different people coming together to do an important job. That is good.

At the moment, he is the only Muslim working at Heia. He does not think he is particularly pious, but he does at least try to pray five times a day. Even when he is at work. He just hangs up a sign and prays in peace. He is grateful that he is allowed to do so. For him, the most beautiful thing in the Koran is that it says everyone is worth the same. Everyone is valuable. He is sure that it says the same in the Bible, too. He applies that principle as employee health and safety rep. Everyone must feel they are worth something. Everyone must be seen. Someone may be having a bad day. That's okay. But you should still try to lift them up. His ex-wife said that he had become 'too Norwegian'. He never understood exactly what she meant. Maybe that he had too many

Norwegian friends? Of course he has a lot of Norwegian friends.

A lot of Somalis find it hard to find a place in the labour market. They apply for 40 jobs and get turned down for all of them. So they give up. He understands. There is a certain reluctance towards them. The threshold is higher. He refused to give up. He wanted to get his foot in the door. Now he is showing other Somalis that it is possible to get a job. And he is showing Norwegians that people from Somalia can be good workers. He is proud of that.

When he started working at Heia, he did not return his empty bottles and cans. Now he returns everything, always. It gives him a good feeling. Like Norway, Somalia is a coastal nation. The sea is important. Now the oceans are being filled with rubbish that has not been sorted – just thrown in the open and washed out to sea. But he works for a company that is part of the solution. When he gets up in the morning, he knows that he is going to a job that is important.

In the summer of 2017, he went back to Somalia. When he left the airport, one thought hit him as he looked around. The landscape was overflowing with bottles and cans. Don't they return their empties?

No, there is no deposit-return system in Somalia. Perhaps we can start up Infinitum Somalia, he says with a laugh. ●



# INFINITUM'S AMBASSADORS 2017

[www.infitummovement.no](http://www.infitummovement.no)



**Terje Håkonsen**

**Born:** 1974

**Occupation:** Professional snowboarder

**Terje on the environment:** It's often said that if you want to change the world, start with yourself. I really believe that. And the point is that we must all do what we can – return our empty bottles, sort our own rubbish and, not least, make sensible choices when we go shopping.



**Simen Knudsen**

**Born:** 1985

**Occupation:** Surfer and founder and leader of the environmental collective Nordic Ocean Watch

**Simen on the environment:** It may sound like splitting hairs, but by using our consumer power, we are telling society what kind of world we want to live in. If you buy bottles that can't be returned, you are saying that recycling isn't important.



**Malin Jacob**

**Born:** 1989

**Occupation:** Blogger and environmental activist

**Malin on the environment:** The deposit-return scheme is a stroke of genius. You pay a small sum to borrow a plastic bottle, and you get your money back when you return it. Not only that, but you are saving the planet from greenhouse gas emissions. For every kilo of plastic that is recycled, we save two kilos of oil.





**Ina Othilie Vikøren Ronæss**

**Born:** 1990

**Occupation:** Studying for a Master's degree in entrepreneurship at the Norwegian University of Science and Technology (NTNU) and blogs at turjenter.no

**Ina on the environment:** If a green lifestyle leads to the mountain tops staying white, I feel that's the least a skier can do to keep the mountain snowy.



**The Wegge brothers**

**Inge Wegge**

**Born:** 1986

**Occupation:** Studied at Nordland Art and Film School

**Markus Wegge**

**Born:** 1987

**Occupation:** Studied nature and outdoor pursuits at Telemark University College, Bø

**Håkon Wegge**

**Born:** 1992

**Occupation:** Longboarder

**The Wegge brothers on the environment:** Be like us and clear up rubbish and empty beverage containers on any beach you visit. The landscape will be even more beautiful and your experience of it will be even better!



**Karl Kristian Mugerud**

**Born:** 1992

**Occupation:** Skier. Studying renewable energy at Sogn & Fjordane University College

**Karl Kristian on the environment:**

Producing new bottles instead of returning the ones we've already got means that we must pump up more oil, use more energy, emit more carbon dioxide and therefore contribute to the glaciers melting even faster and making summer skiing even less possible for every passing year.

## THE BOARD



**Stein Rømmerud**  
Chairman  
Coca-Cola Enterprises Norge AS



**Svein Sollie**  
Deputy Chairman  
Asko Norge AS



**Lars Midtgaard**  
Director  
Hansa Borg Bryggerier AS



**Sven Serck-Hansen**  
Director  
Ringnes AS



**Tore Nygaardsmoen**  
Director  
Coop Norge Handel AS



**Benno Graser**  
Director  
Rema 1000 Distribusjon AS

### Deputy Directors in 2017

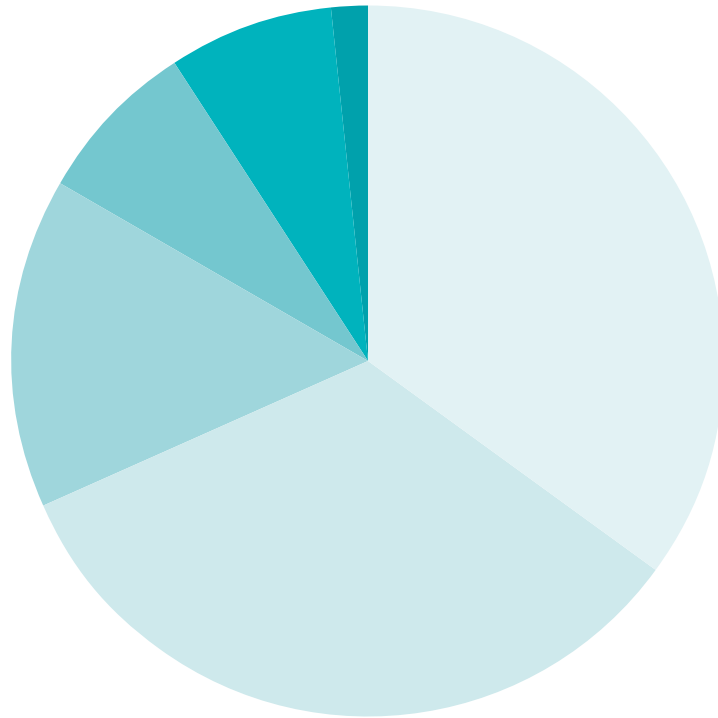
**Siv Grønning**, Ringnes AS, Bryggerienes Servicekontor (BS)

**Jens Olav Flekke**, Dagligvarehandelens Miljø Forum (DMF)

**Torgeir Løftingsmo**, Coop Norge Handel (CNH)

**Christian Aass**, Aass Bryggerier AS, Bryggerienes Servicekontor (BS)

**Thomas Weihe**, Dagligvareleverandørenes Forening (DLF)



## INFINITUM'S OWNERS

- 35,0% Bryggeri- og Drikkevareforeningens Servicekontor AS
- 33,5% Dagligvarehandelens Miljøforum AS
- 15,0% COOP Norge AS
- 7,5% NHO Mat og Drikke
- 7,5% Dagligvareleverandørenes Servicekontor
- 1,5% Virke Kiosk og Bensin

Income Statement (figures in NOK '000)

Operating revenues and expenses	2017	2016
Administration fees	99 843	114 109
Income from deposit-return scheme	1 708 685	1 659 296
Sale of collected materials	140 943	117 305
Other operating revenues	31 686	33 547
<b>Total operating revenues</b>	<b>1 981 157</b>	<b>1 924 257</b>
Deposit-return scheme expenses	1 512 411	1 465 649
Handling charges	224 593	218 645
Transport costs	105 813	104 034
Other production costs	76 409	72 534
<b>Total operating expenses</b>	<b>1 919 226</b>	<b>1 860 862</b>
<b>Operating profit/loss</b>	<b>61 931</b>	<b>63 395</b>
Admin., marketing and depreciation	61 509	61 645
<b>Operating profit/loss</b>	<b>422</b>	<b>1 750</b>
<b>Net financial items</b>	<b>787</b>	<b>743</b>
<b>Profit/loss after financial items</b>	<b>1 209</b>	<b>2 493</b>

Key figures

Supply chain	Cans	Tonnes	% added	PET	Tonnes	% added
Total sales	614 503 691	9 525		622 628 246	22 477	
Supply chain storage	-12 100 000	-188		-800 000	-66	
Added (Sales + supply chain storage)	602 403 691	9 337	100%	621 828 246	22 412	100%
<b>Total returned via reverse vending machines</b>	<b>508 096 599</b>	<b>7 875</b>	<b>84,3%</b>	<b>535 687 113</b>	<b>19 679</b>	<b>87,8%</b>
Via centralised sorting	7 245 399	112	1,2%	1 008 428	37	0,2%
Via slag sorting	53 355 898	827	8,9%			
Via materials sorted at source	7 528 793	116,7	1,2%	1 507 612	55	0,2%
Energy recovery	11 535 377	178,8	1,9%	53 138 582	1 929	8,6%
<b>Total recycled from waste</b>	<b>79 665 467</b>	<b>1 235</b>	<b>13,2%</b>	<b>55 654 621</b>	<b>2 020</b>	<b>9,0%</b>
<b>Total recycled</b>	<b>587 762 066</b>	<b>9 110</b>	<b>97,6%</b>	<b>591 341 734</b>	<b>21 699</b>	<b>96,8%</b>
Bottom ash residues	11 357 138	176	1,9%			
Loss on energy recovery	2 191 631	34,0	0,4%	10 016 399	364	1,6%
Unknown disposal	1 092 856	16,9	0,2%	20 470 113	349	1,6%
<b>Total not returned</b>	<b>94 307 092</b>	<b>1 462</b>	<b>15,7%</b>	<b>86 141 133</b>	<b>2 733</b>	<b>12,2%</b>
<b>Total</b>	<b>602 403 691</b>	<b>9 337</b>	<b>100%</b>	<b>621 828 246</b>	<b>22 412</b>	<b>100%</b>
<b>Foreign units</b>	<b>28 084 111</b>			<b>4 732 225</b>		



Balance Sheet (Figures in NOK '000)

Assets	2017	2016
Non-current assets		
Property, plant & equipment		
Land, buildings & other real property	54 629	55 996
Machinery, movables, fixtures, etc	47 160	55 409
Property, plant & equipment	101 789	111 405
Non-current financial assets		
Net pension assets	269	58
Non-current financial assets	269	58
<b>Total non-current assets</b>	<b>102 058</b>	<b>111 463</b>
Current assets		
Receivables		
Trade receivables	211 514	184 442
Other receivables	18 143	74 822
<b>Total receivables</b>	<b>229 657</b>	<b>259 264</b>
<b>Bank deposits, cash, cash equivalents</b>	<b>86 937</b>	<b>13 640</b>
<b>Total current assets</b>	<b>316 594</b>	<b>272 904</b>
<b>Total assets</b>	<b>418 652</b>	<b>384 367</b>

Equity and liabilities	2017	2016
Equity		
Paid-in equity		
Shareholders' funds (200 shares @ NOK 7,500)	1 500	1 500
<b>Total paid-in capital</b>	<b>1 500</b>	<b>1 500</b>
Retained earnings		
Other equity	23 673	22 465
<b>Total retained earnings</b>	<b>23 673</b>	<b>22 465</b>
<b>Total equity</b>	<b>25 173</b>	<b>23 965</b>
Liabilities		
Current liabilities		
Trade payables	102 145	92 686
Public charges payable	2 619	2 283
Other current liabilities	10 973	6 662
Provision to deposit-return liability fund	277 742	258 771
<b>Total current liabilities</b>	<b>393 479</b>	<b>360 402</b>
<b>Total liabilities</b>	<b>393 479</b>	<b>360 402</b>
<b>Total equity and liabilities</b>	<b>418 652</b>	<b>384 367</b>

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RETURN EVERYTHING. IT'S WORTH IT.



**INFINITUM**

RETURN EVERYTHING. IT HAS A VALUE.